

### ABSTRACT OF THE DISCLOSURE

An adjustable connection admission control method and device for packet-based switches assigns equivalent bandwidths to variable speed connections. The equivalent bandwidths of the variable speed connections are increased or reduced by a scaling factor to achieve an assigned bandwidth. The method and device determine whether to accept or refuse  
5 new variable speed connections based on whether the sum of equivalent bandwidths for existing variable speed connections and new variable speed connections exceeds the bandwidth available to variable speed connections. The connection admission control method and device also determines whether to accept or refuse new constant speed and new unspecified connections. For constant speed connections, the sum of existing and new constant speed  
10 connections is obtained. If the sum of bandwidths for existing and new constant speed connections exceeds a maximum factor, the bandwidth available to constant speed connections is reduced by a constant speed traffic factor. At least a portion of the unspecified connections do not have a sustained cell rate. The sustained cell rate is determined by multiplying a peak cell rate by an SCR factor. Equivalent bandwidths are assigned to unspecified connections and  
15 are increased or reduced by the scaling factor to achieve an assigned bandwidth. New unspecified connections are accepted or refused based on whether the sum of bandwidths for existing and new unspecified connections exceeds a bandwidth available to unspecified connections. The scaling factor, traffic factor, maximum factor, constant speed traffic factor and SCR factor can be adjusted.